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Marshall
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SPECIFICATION

Title of the Invention

Oil or Fat Composition

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Field of the Invention and Related Art Statement

This invention relates to an oil or fat composition for food. More specifically, it relates to an oil or fat composition which is less accumulated as body fat and is excellent in cooking properties and flavor as edible oil.

Obesity is a state of body fat being accumulated in excess, and it is well known that many diseases including metabolic disorders such as diabetes and hyperlipemia and diseases in circulatory organs such as hypertension and ischemic cardiac diseases tend to follow obesity. According to the results of the national nutrition investigation carried out by the Japanese Welfare Ministry, one of seven adults is obese, and obesity is a close problem not only in Europe and America but also in Japan. Fat contained in meals is one of nutrients most profoundly related to the accumulation of body fat, but the excessive ingestion of fat may result in obesity. However, fat has intrinsic taste, and meals of extremely reduced fat are often insufficient to give satisfaction. Further, when deep-fried food or fried food is made, an edible oil is indispensable as a heating medium.

For resolving such situation, so-called fat substitutes have been developed. However, none of them are fully satisfactory in safety, physical properties, cooking properties and flavor. For example, it is

disclosed that sucrose fatty acid esters are not absorbed in the digestive tract and excreted into the feces, and can be used as a low calorie oil (U.S. Patent No. 3,600,186). In the United States of America, sucrose fatty acid esters are permitted to be used for salty snack confectionery, and potato chips in use of them are already put on the market, but the indication of "There is a possibility that abdominal convulsions or loose passages are caused" and "The absorption of fat soluble vitamins is inhibited" is compulsory for commodities in use of sucrose fatty acid esters. The energy density of protein or carbohydrates is half or less than that of fat. Thus, it is known that by processing protein or carbohydrates so that fat - like physical properties or flavor may come out, low calorie fat substitutes can be provided (Eiyogaku Review (Dietetics Review), volume 4, No. 4, pages 23 - 33, 1996). It is possible to make low calorie ice creams, bakery products, cakes by using such fat substitutes. However, they have the disadvantages that they are poor in resistance to heat and cannot be used as heating media for deep - frying or frying.

In Japanese Laid - open Patent Publication (Tokuhyohei) No. 501812 /1992, it is disclosed that a low calorie oil or fat can be provided using triglycerides composed of long - chain fatty acids and short - chain fatty acids. However, triglycerides composed of short - chain fatty acids have peculiar odor, and are not suitable as general purpose edible oils because foodstuffs to be cooked using them are limited. Further, middle - chain fatty acids are known to be lower in body fat accumulation because they